

U.S. ENVIRONMENTAL PROTECTION AGENCY

UNDERGROUND INJECTION CONTROL PERMIT: CLASS III

Permit Number NYU397001

Modified December 1, 2006

Pursuant to the Underground Injection Control regulations of the U.S. Environmental Protection Agency codified at Title 40 of the Code of Federal Regulations, Parts 124, 144, 146, and 147, Inergy Midstream, LLC, Two Brush Creek Blvd, Suite 200, Kansas City, Missouri 64112, is hereby authorized to operate the existing Class III injection wells (Cavern Wells 1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 12, and 13) at 42° 18' 32" latitude - 77° 15' 21" longitude, Inergy Midstream, LLC, 7535 Eagle Valley Road, Bath, New York 14810, into the Syracuse Salt Formation, upon the condition that the permittee meet the restrictions set forth herein.

All references to Title 40 of the Code of Federal Regulations are to regulations that are in effect on the date that this permit is effective. The Plugging and Abandonment Plan is incorporated into this permit as an attachment.

This permit shall become effective thirty (30) days after the date of service unless review is requested under 40 C.F.R. Part 124.19.

Modified December 1, 2006

This permit and the authorization to inject shall expire ten years from the original effective date (August 25, 1998), unless terminated. It will expire, also, upon delegation of primary enforcement responsibility to the State of New York, unless that State chooses to adopt this permit as a State permit.

Signed this 1st day of DECEMBER 2006.



Dore LaPosta, Director

Division of Enforcement and Compliance Assistance

PART I

GENERAL PERMIT COMPLIANCE

A. EFFECT OF PERMIT

The permittee is allowed to engage in underground injection in accordance with the conditions of this permit. The permittee, authorized by this permit, shall not construct, operate, maintain, convert, plug, abandon, or conduct any other injection activity in a manner that allows the movement of fluid containing any contaminant into underground sources of drinking water, if the presence of that contaminant may cause a violation of any primary drinking water regulation under 40 CFR Part 142 or may otherwise adversely affect the health of persons. Any underground injection activity not specifically authorized in this permit is prohibited.

Compliance with this permit does not constitute a defense to any action brought under the Safe Drinking Water Act (SDWA), or any other common or statutory law or regulation. Issuance of this permit does not convey property rights of any sort or any exclusive privilege; nor does it authorize any injury to persons or property, any invasion of other private rights, or

any infringement of State or local law or regulations.
Nothing in this permit shall be construed to relieve the permittee of any duties under applicable regulations.

B. PERMIT ACTIONS

1. Modification, Revocation, Reissuance and Termination

The Director may, for cause or upon request from the permittee, modify, revoke and reissue, or terminate this permit in accordance with 40 CFR §§ 144.12, 144.39, and 144.40. Also, the permit is subject to minor modifications for cause as specified in 40 CFR §144.41. The filing of a request for a permit modification, revocation and reissuance, or termination, or the notification of planned changes, or anticipated noncompliance on the part of the permittee, does not stay the applicability or enforceability of any permit condition.

2. Transfer of Permits

This permit is not transferable to any person except in accordance with 40 CFR §144.38.

C. SEVERABILITY

The provisions of this permit are severable, and if any provision of this permit or the application of any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this permit shall not be affected thereby.

D. CONFIDENTIALITY

In accordance with 40 CFR Part 2 and §144.5, any information submitted to EPA pursuant to this permit may be claimed as confidential by the submitter. Any such claim must be asserted at the time of submission by stamping the words "confidential business information" on each page containing such information. If no such claim is made at the time of submission, EPA may make the information available without further notice. If a claim is asserted, the validity of the claim will be assessed in accordance with the procedures in 40 CFR Part 2 (Public Information). Claims of confidentiality for the following information will be denied:

- 1) The name and address of the permittee.
- 2) Information which deals with the existence, absence or level of contaminants in drinking water.

E. DUTIES AND REQUIREMENTS

1. Duty to Comply

The permittee shall comply with all applicable UIC Program regulations and conditions of this permit, except to the extent and for the duration such noncompliance is authorized by an emergency permit issued in accordance with §144.34. Any permit noncompliance constitutes a violation of the SDWA and is grounds for enforcement action, permit termination, revocation and reissuance, modification, or for the denial of a permit renewal application. Such noncompliance may also be grounds for enforcement action under RCRA.

2. Penalties for Violations of Permit Conditions

Any person who violates a permit requirement is subject to civil penalties, fines, and other enforcement action under the SDWA and may be subject to such actions pursuant to RCRA. Any person who willfully violates permit conditions may be subject to criminal prosecution.

3. Continuation of Expiring Permits

(a) Duty to Reapply

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must submit a complete application for a new permit at least 270 days before this permit expires.

(b) Permit Extensions

The conditions of an expired permit may continue in force only in accordance with 5 U.S.C. 558(c) and 40 CFR §144.37.

(c) Effect

Permits continued under 5 U.S.C. 558(c) and 40 CFR §144.37 remain fully effective and enforceable.

(d) Enforcement

When the permittee is not in compliance with the conditions of the expiring or expired permit, the Director may choose to do any or all of the following:

- (1) Initiate enforcement action based upon the permit which has been continued;

- (2) Issue a notice of intent to deny the new permit. If the permit is denied, the owner or operator would then be required to cease the activities authorized by the continued permit or be subject to enforcement action for operating without a permit;
- (3) Issue a new permit under 40 CFR Part 124 with appropriate conditions; or
- (4) Take other actions authorized by Underground Injection Control regulations.

(e) State Continuation

An EPA-issued permit does not continue in force beyond its expiration date under Federal law if at that time a State has primary enforcement authority. A State authorized to administer the UIC program may continue either EPA- or State-issued permits until the effective date of the new permits if State law allows. Otherwise, the facility or activity is operating without a permit from the time of expiration of the old permit to the effective date of the State-issued new permit.

4. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense, for a permittee in an enforcement action, that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

5. Duty to Mitigate

The permittee shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this permit.

6. Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of this permit.

7. Duty to Provide Information

The permittee shall furnish to the Director, within a time specified, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.

8. Inspection and Entry

The permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:

- (a) Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this permit;
- (b) Have access to and copy, at reasonable times, any records that are kept under the conditions of this permit;
- (c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and

- (d) Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by SDWA, any substances or parameters at any location.

9. Records

- (a) The permittee shall retain records and all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation and copies of all reports required by this permit, for a period of at least five years from the date of the sample, measurement or report.
- (b) The permittee shall maintain records of all data required to complete the permit application form for this permit and any supplemental information submitted under 40 CFR §144.31 for a period of at least five years from the date the application was signed. These periods may be extended by request of the Director at any time.
- (c) The permittee shall retain records concerning the nature and composition of all injected fluids until

three years after the completion of plugging and abandonment, which has been carried out in accordance with the attached plugging and abandonment plan and is consistent with 40 CFR §146.10.

- (d) The permittee shall continue to retain such records after the retention period specified by paragraphs (a) through (c) above unless he delivers the records to the Director or obtains written approval from the Director to discard the records.
- (e) Records of monitoring information shall include:
 - (1) The date, exact place, and time of sampling or measurements;
 - (2) The individual(s) who performed the sampling or measurements;
 - (3) A precise description of both sampling methodology and the handling (custody) of samples;
 - (4) The date(s) analyses were performed;
 - (5) The names of individual(s) who performed the analyses;
 - (6) The analytical techniques or methods used; and
 - (7) The results of such analyses.

10. Monitoring

Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. Monitoring results shall be reported at the intervals specified in Part II, Section C of this permit. Monitoring the nature of fluids shall comply with applicable analytical methods cited and described in Table I of 40 CFR §136.3 or in Appendix III of 40 CFR Part 261 or in certain circumstances by other methods that have been approved by the Director.

11. Signatory Requirements

All reports or other information, required to be submitted by this permit or requested by the Director, shall be signed and certified in accordance with 40 CFR §144.32.

12. Reporting Requirements

(a) Planned Changes

The permittee shall give written notice to the Director, as soon as possible, of any planned physical alterations or additions to the Class III injection wells, or to any other structures related to Class III

injection activities or requirements specified in this permit, at the permitted facility.

(b) Anticipated Noncompliance

The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

(c) Compliance Schedules

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 30 days following each schedule date.

(d) Twenty-four Hour Reporting

- (1) The permittee shall report to the Director any noncompliance which may endanger health or the environment. Any such information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. Such reports shall include, but not be limited to, the following information:

- (i) Any monitoring or other information which indicates that any contaminant may cause an endangerment to an underground source of drinking water.
 - (ii) Any noncompliance with a permit condition, or malfunction of the injection system, which may cause fluid migration into or between underground sources of drinking water.
- (2) A written submission shall also be provided within five days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.

(e) Other Noncompliance

The permittee shall report all other instances of noncompliance not otherwise reported at the time monitoring reports are submitted. The reports shall

contain the information listed in Section 12(d)(2) above.

(f) Other Information

When the permittee becomes aware that he failed to submit any relevant facts in the permit application or submitted incorrect information in a permit application or in any report to the Director, the permittee shall submit such facts or information within 10 days.

(g) Report on Permit Review

Within 30 days of receipt of this permit, the permittee shall report to the Director that he has read and is personally familiar with all terms and conditions of this permit.

F. COMMENCING INJECTION

An operator may not commence injection into new wells until:

- (a) Information concerning the injection formation fracture pressure has been submitted to the Director, and
 - (b) Mechanical integrity of the well has been demonstrated in accordance with Section H of Part I and Section A of Part II, and
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- (c) The acoustic cement bond log has been submitted in accordance with Section A of Part II, and
 - (d) Corrective action has been performed in accordance with Section I of Part I, and
 - (e) Construction is complete, and the permittee has submitted to the Director, by Certified Mail with return receipt requested, a notice of completion of construction using EPA Form 7520-9, and either:
 - i. The Director has inspected or otherwise reviewed the new injection well and finds it is in compliance with the conditions of the permit; or
 - ii. The permittee has not received, within 13 days of the date of the Director's receipt of the notice required above, notice from the Director of his or her intent to inspect or otherwise review the new injection well, in which case prior inspection or review is waived and the permittee may commence injection.
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G. MECHANICAL INTEGRITY

1. Standards

All injection wells must have and maintain mechanical integrity consistent with 40 CFR §146.8.

2. Prohibition Without Demonstration

The permittee shall not commence injection into new wells after the effective date of this permit unless the permittee has demonstrated that the well covered by this permit has mechanical integrity in accordance with 40 CFR §146.8 and the permittee has received written notice from the Director that such demonstration is satisfactory.

3. Subsequent Mechanical Integrity Demonstrations

A demonstration of mechanical integrity in accordance with 40 CFR §146.8 shall be made no later than five years from the date of the last approved demonstration. Mechanical integrity shall also be demonstrated any time a loss of mechanical integrity appears to arise during operation. The permittee shall notify the Director of his intent to demonstrate mechanical integrity at least 30 days prior to such demonstration. The permittee shall

report the results of a mechanical integrity demonstration within 90 days after completion.

4. Loss of Mechanical Integrity

If the permittee or the Director finds that the well fails to demonstrate mechanical integrity during a test, or a loss of mechanical integrity as defined by 40 CFR §146.8 becomes evident during operation, the operation shall be halted immediately and shall not be resumed until the Director gives approval to recommence injection.

5. Mechanical Integrity Request From Director

The Director may, by written notice, require the permittee to demonstrate mechanical integrity at any time.

H. CORRECTIVE ACTION

1. Compliance

The permittee shall comply with the approved corrective action plan, and with 40 CFR §144.55 and §146.7. For this permittee, corrective actions will be needed if any well fails the mechanical integrity test or if there is

upward fluid migration. If the above events do not occur, corrective actions will not be required.

2. Injection Commencement

The permittee shall not commence injection in a new well until all corrective actions have been taken in accordance with 40 CFR §144.55.

3. Upward Fluid Migration

Should upward fluid migration occur through the well bore of any previously unknown, improperly plugged, or unplugged well in the area of review, due to injection of permitted fluids, injection will be shut-in until proper plugging can be accomplished. Any flowage from such undiscovered wells will be considered noncompliance with this permit. Should any problem develop in the injection well, injection will be shut-in until such repairs can be made as to remedy the situation.

I. PLUGGING AND ABANDONMENT

1. Notice of Plugging and Abandonment

The permittee shall notify the Director no later than 45 days before conversion or abandonment of the well.

2. Plugging and Abandonment

The permittee shall plug and abandon the well consistent with 40 CFR §146.10, as provided for in the attached plugging and abandonment plan, which is hereby incorporated as a part of this permit. Within 60 days after plugging a well, or at the time of the next quarterly report (whichever comes first), the permittee shall submit a report to the Director. The report shall be certified as accurate by the person who performed the plugging operation, and shall consist of either:

- (a) A statement that the well was plugged in accordance with the plan previously submitted to the Director; or
- (b) If the actual plugging differed from the approved plan, a statement defining the actual plugging and why the Director should approve such a deviation. Any deviation from a previously approved plan which may endanger USDWs is cause for the Director to require the operator to replug the well.

3. Inactive Wells

After a cessation of injection for two years, the permittee shall plug and abandon the well in accordance with the plan unless he:

- (a) Has provided notice to the Director; and
- (b) Has described actions or procedures, which are deemed satisfactory by the Director, that the permittee will take to ensure that the well will not endanger the USDWs during the period of temporary abandonment. These actions and procedures shall include compliance with the technical requirements applicable to active injection wells unless waived, in writing, by the Director.

J. FINANCIAL RESPONSIBILITY

1. Financial Responsibility

The permittee is required to maintain financial responsibility and resources to close, plug, and abandon the underground injection operation in a manner prescribed by the Director. The permittee shall show evidence of such financial responsibility to the Director by the submission of a surety bond, or other adequate assurance, such as

financial statements or other materials acceptable to the Director.

2. Insolvency

An owner or operator must also notify the Director by certified mail of the commencement of voluntary or involuntary proceedings under Title 11 (Bankruptcy), U.S. Code naming the owner or operator as debtor, within 10 business days after the commencement of the proceeding. A guarantor or a corporate guarantee must make such a notification if he is named as debtor, as required under the terms of the guarantee.

K. DEFINITIONS

1. Abandoned Wells

"Abandoned Well" means a well whose use has been permanently discontinued or which is in a state of disrepair such that it cannot be used for its intended purpose or for observation purposes.

2. Application

"Application" means the EPA standard national forms for

applying for a permit, including additions, revisions or modifications to the forms; or forms approved by EPA for use in approved States, including any approved modifications or revisions.

3. Aquifer

"Aquifer" means a geological "formation", group of formations, or part of a formation that is capable of yielding a significant amount of water to a well or spring.

4. Casing

"Casing" means a pipe or tubing of appropriate material, of varying diameter and weight, lowered into a borehole during or after drilling in order to support the sides of the hole and thus prevent the walls from caving, to prevent loss of drilling mud into porous ground, or to prevent water, gas, or other fluid from entering or leaving the hole.

5. Cementing

"Cementing" means the operation whereby a cement slurry is pumped into a drilled hole and/or forced behind the casing.

6. Class I Well

- (a) A "Class I Well" means a well used by generators of hazardous waste or operators of hazardous waste management facilities to inject hazardous waste beneath the lowermost formation containing within one quarter mile of the well bore an underground source of drinking water.
- (b) Other industrial and municipal disposal wells which inject fluids beneath the lowermost formation containing, within one quarter mile of the well bore, an underground source of drinking water.

7. Class II Well

A "Class II Well" means a well which injects fluids:

- (a) Which are brought to the surface in connection with conventional oil or natural gas production and may be commingled with waste waters from gas plants which are an integral part of production operations, unless those waters are classified as a hazardous waste at the time of injection; or
 - (b) For enhanced recovery of oil or natural gas; or
 - (c) For storage of hydrocarbons which are liquid at standard temperature and pressure.
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8. Class III Well

A "Class III Well" means a well which injects for:

- (a) Mining of sulfur by the Frasch process; or
- (b) In-situ production of uranium or other metals (This category includes only in-situ production from ore bodies which have not been conventionally mined. Solution mining of conventional mines such as stopes leaching is included in Class V); or
- (c) Solution mining of salts or potash.

9. Class IV Well

A "Class IV Well" means:

- (a) A well used by generators of hazardous waste or of radioactive waste, by owners or operators of hazardous waste management facilities, or by owners or operators of radioactive waste disposal sites to dispose of hazardous waste or radioactive waste into a formation which within one quarter (1/4) mile of the well contains an underground source of drinking water; or
 - (b) A well used by generators of hazardous waste or of radioactive waste, by owners or operators of
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hazardous waste management facilities, or by owners or operators of radioactive waste disposal sites to dispose of hazardous waste or radioactive waste above a formation which within one quarter (1/4) mile of the well contains an underground source of drinking water; or

- (c) A well used by generators of hazardous waste or owners or operators of hazardous waste management facilities to dispose of hazardous waste which cannot be classified under §146.05(a)(1) or §146.5(d)(1) and (2) (e.g., wells used to dispose of hazardous wastes into or above a formation which contains an aquifer which has been exempted pursuant to §146.04).

10. Class V Well

A "Class V Well" means a well not included in Class I, II, III or IV.

11. Composite Sample

A "Composite Sample" is a combination of not less than 8 portions, of at least 100 mls., collected over the full time period specified in this permit. The composite

sample must be flow proportioned by either time interval between each aliquot or by volume as it relates to effluent flow at the time of sampling or total flow at the time of sampling or total flow since collection of the previous aliquot. Aliquots may be collected manually or automatically.

12. Confining Bed

"Confining Bed" means a body of impermeable or distinctly less permeable material stratigraphically adjacent to one or more aquifers.

13. Confining Zone

"Confining Zone" means a geological formation, group of formations, or part of a formation that is capable of limiting fluid movement above an injection zone.

14. Contaminant

"Contaminant" means any physical, chemical, biological, or radiological substance or matter in water.

15. Daily Average of Parameter Monitored Continuously

"Daily Average of Parameter Monitored Continuously" means the sum of values observed and recorded periodically as

specified in this permit, divided by the total number of values observed and recorded during that day.

16. Daily Average of Parameters Not Monitored Continuously

"Daily Average of Parameters Not Monitored Continuously" means the sum of all daily observed and recorded values divided by the total number of values observed and recorded during that day.

17. Daily or Monthly Maximum Value

"Maximum Value" means the highest value recorded during the day or month, respectively. For continuously-monitored parameters, the highest value recorded is the highest instantaneous value for the continuous monitoring recording.

18. Daily or Monthly Minimum Value

"Minimum Value" means the lowest value recorded during the day or month, respectively. For continuously-monitored parameters, the lowest value recorded is the lowest instantaneous value from the continuous monitoring recording.

19. Director

"Director" means the Director of the Division of Enforcement and Compliance Assistance of EPA Region II, unless at some time in the future the State receives authority to administer the UIC program and assumes jurisdiction over the permit; at which time, the Director of the State program receiving authorization becomes the Director.

20. Drilling Mud

"Drilling Mud" means a heavy suspension used in drilling an "injection well", introduced down the drill pipe and through the drill bit.

21. Exempted Aquifer

"Exempted Aquifer" means an "aquifer" or its portion that meets the criteria in the definition of "underground source of drinking water" but which has been exempted according to the procedures in 40 CFR §144.7.

22. Facility or Activity

"Facility or Activity" means any UIC "injection wells", or any other facility or activity that is subject to regulation under the UIC program.

23. Fault

"Fault" means a surface or zone of rock fracture along which there has been displacement.

24. Flow Rate

"Flow Rate" means the volume per unit time given to the flow of gases or other fluid substance which emerges from an orifice, pump, turbine or passes along a conduit or channel.

25. Fluid

"Fluid" means any material or substance which flows or moves, whether in a semi-solid, liquid, sludge, gas, or any other form or state.

26. Formation

"Formation" means a body of consolidated or unconsolidated rock characterized by a degree of lithologic homogeneity which is prevailingly, but not necessarily, tabular and is mappable on the earth's surface or traceable in the subsurface.

27. Formation Fluid

"Formation Fluid" means "fluid" present in a "formation" under natural conditions as opposed to introduced fluids, such as "drilling mud".

28. GPM

"GPM" means gallons per minute.

29. Grab Sample

"Grab Sample" means a single portion which is not a composite sample. The sample(s) shall be collected at the period(s) most representative of the monitored activity.

30. Injection Tubing or Tubing

"Injection Tubing" means a system of pipes, of appropriate material, inserted into the well through the casing to convey the injection fluid to the injection zone and to prevent casing degradation.

31. Injection Zone

"Injection Zone" means a geological "formation", group of formations, or part of a formation receiving fluids through a "well".

32. Monthly Average of Parameters Monitored Continuously

"Monthly Average of Parameters Monitored Continuously" means the sum of values observed and recorded periodically as specified in this permit, divided by the total number of values observed and recorded during that month.

33. Monthly Average of Parameters Monitored Daily

"Monthly Average of Parameters Monitored Daily" means the sum of all daily observed and recorded values divided by the total number of values observed and recorded during that month.

34. Owner or Operator

"Owner or Operator" means the owner or operator of any "facility or activity" subject to regulation under the UIC program.

35. Packer

"Packer" means a device lowered into a well to produce a fluid-tight seal.

36. Person

"Person" means an individual, association, partnership, corporation, municipality, State or Federal agency, or an agent or employee thereof.

37. Plugging

"Plugging" means the act or process of stopping the flow of water, oil or gas into or out of a formation through a borehole or well penetrating that formation.

38. Plugging Record

"Plugging Record" means a systematic listing of permanent or temporary abandonment of water, oil, gas, test, exploration, and waste injection wells; and may contain a well log, description, amounts, and types of plugging material used, the method employed for plugging, a description of formations which are sealed and a graphic log of the well showing formation location, formation thickness, and location of plugging.

39. Pressure

"Pressure" means the total load or force per unit area acting on a surface.

40. PSIA

"PSIA" means pounds per square inch absolute.

41. PSIG

"PSIG" means pounds per square inch gauge.

42. Schedule of Compliance

"Schedule of Compliance" means a schedule or remedial measures included in a "permit" including an enforceable sequence of interim requirements (for example, actions, operations, or milestone events) leading to compliance with the "appropriate Act and regulations".

43. SDWA

"SDWA" means the Safe Drinking Water Act (Pub. L. 93-523, as amended by Pub. L. 96-502; 42 U.S.C. 300f et seq.).

44. Site

"Site" means the land or water area where any "facility or activity" is physically located or conducted, including adjacent land used in connection with the facility or activity.

45. Surface Casing

"Surface Casing" means the first string of well casing to be installed in the well.

46. Total Dissolved Solids (TDS)

"Total Dissolved Solids (TDS)" means the total dissolved (filterable) solids as determined by the use of the method specified in 40 CFR Part 136.

47. UIC

"UIC" means the Underground Injection Control Program under Part C of the Safe Drinking Water Act, including an "approved State program".

48. Underground Injection

"Underground Injection" means a "well injection".

49. Underground Source of Drinking Water (USDW)

"Underground Source of Drinking Water (USDW)" means an aquifer or its portion:

- (a) (1) Which supplies any public water system; or
- (2) Which contains a sufficient quantity of ground water to supply a public water system; and
 - (i) Currently supplies drinking water for human consumption; or

(ii) Contains fewer than 10,000 mg/l total
dissolve solids; and

(b) Which is not an exempted aquifer.

50. Well Injection

"Well Injection" means the subsurface emplacement of fluids through a bored, drilled or driven well; or through a dug well, where the depth of the dug well is greater than the largest surface dimension.

51. Well Plug

"Well Plug" means a watertight and gastight seal installed in a borehole or well to prevent movement of fluids.

52. Well Stimulation

"Well Stimulation" means several processes used to clean the well bore, enlarge channels, and increase pore space in the interval to be injected, thus making it possible for wastewater to move more readily into the formation, and includes (1) surging, (2) jetting, (3) blasting, (4) acidizing, and (5) hydraulic fracturing.

53. Well Monitoring

"Well Monitoring" means the measurement, by on-site instruments or laboratory methods, of the quality of water in a well.

Modified December 1, 2006

PART II
WELL-SPECIFIC CONDITIONS FOR UIC PERMITS

A, CONSTRUCTION

1. Casing and Cementing

Cavern Wells 1, 2, 3, 4, 5 and 6 were drilled in the 1950s, and each was constructed with three sets of casing. Cavern Well 7 was drilled in 1992 and completed in 1993 with three sets of casing, all cemented to the surface, Cavern Wells 9, 10, 11, 12 and 13 were drilled and completed in 1995. Well 9 was constructed with three sets of casing, all cemented to the surface, and Wells 10, 11, 12 and 13 were constructed with two sets of casing per well, both cemented to the surface. The construction details for the wells were submitted by BPSI as part of its May 21, 1996 Underground Injection Control Class III permit application. In accordance with Part I, Section E(12)(a) of this permit, the permittee must give written notice to the Director, as soon as possible, of any plans to install or remove tubing in any of the Class III injection wells covered by this permit.

2. Logging and Testing

BPSI conducted formation-density/gamma-ray logs on Cavern Wells 7, 9, 10, 11, 12 and 13 during their construction.

3. Mechanical Integrity Test

a. Pressure Test

The wells must be individually pressure-tested with fresh water (a packer must be set at the bottom of the well during pressure-testing with water) or saturated brine or nitrogen gas at or above the maximum allowed injection pressure. If the pressure drops less than 5% in an hour, using a dead-weight tester or an electronic pressure gauge that has been calibrated with a dead-weight tester, the well passes the mechanical integrity test (MIT). As an alternative to the standard pressure test, the wells may be tested by the water-brine interface test described in the Federal Register (Vol. 57, No. 7, January 10, 1992).

b. Absence of Significant Fluid Movement

In addition to the pressure test, the permittee, in order to demonstrate that there is no significant fluid movement into an underground source of drinking water through vertical channels adjacent to the injection well

bore, will submit the results of a temperature log or a noise log. For Class III wells where the nature of the casing precludes the use of the temperature log and the noise log, cementing records demonstrating the presence of adequate cement to prevent significant fluid movement into an underground source of drinking water through vertical channels adjacent to the injection well bore will be submitted to the Director. EPA may require that the cementing records be confirmed by cement evaluation logs designed to identify and track channels in the cement between the casing and the formation.

A descriptive report interpreting the results of the temperature log, noise log or cement evaluation logs shall be prepared by a knowledgeable log analyst and will be submitted to the Director.

Where cementing records are used to demonstrate the absence of significant fluid movement, EPA may require a groundwater-monitoring program designed specifically to verify the absence of significant fluid movement and detect any fluid that might migrate into an underground source of drinking water through channels in the cement outside the casing or between casings.

If a well fails either part of the MIT, all injection into that well must cease until corrective actions have been taken and the well passes another MIT.

All injection wells must demonstrate mechanical integrity. After the initial demonstration of mechanical integrity, MITs must be repeated at least once every five years.

In addition to mechanical integrity testing required before water is injected for the purpose of solution mining, EPA may also require mechanical integrity testing (the pressure test and the demonstration of the absence of significant fluid movement) after initial cavern development but before hydrocarbons are placed in the cavern in order to confirm that the seal around the casing seat is still intact and will allow no hydrocarbons, or other fluids, to be released from the cavern and threaten an underground source of drinking water. EPA may specify the liquid or gas to be used in the pressure test as well as the duration of the pressure test.

B. OPERATIONS

1. Injection Formation

Injection shall be limited to the Syracuse Salt Formation. The permittee shall limit the size of the salt caverns (to a maximum of 200 feet in diameter), and their proximity to each other, so that the potential for subsidence is minimized. EPA may require sonar surveys to confirm estimated cavern diameters.

2. Injection Pressure Limitation

Injection pressure at the wellhead shall be calculated so as to assure that the pressure in the injection zone during injection does not initiate new fractures or propagate existing fractures into the injection zone.

In no case shall injection pressure initiate fractures in the confining zone or cause the migration of injection or formation fluids into an underground source of drinking water. The maximum allowed injection pressure is 550 psi, measured at the wellhead.

3. Additional Injection Limitations

Injection between the outermost casing protecting underground sources of drinking water and the wellbore is prohibited. The injection fluid shall be fresh water or brine. The permittee must give written notice to the Director as soon as possible before any placement of hydrocarbons into a well whose cavern does not already contain hydrocarbons, and whenever a cavern is scheduled to be emptied of all hydrocarbons, so that arrangements can be made for sonar surveys, mechanical integrity tests or other logs or tests to be conducted while the cavern contains no hydrocarbons.

C. MONITORING

1. Monitoring of Fluid Injection and Production

Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. The following parameters shall be monitored:

- volume of fluid injected into each well each day
 - total dissolved solids concentration (salinity) of fluid injected into each well each day
 - volume of brine produced from each well each day
-

- total dissolved solids concentration (salinity) of brine produced from each well each day
- injection pressure and brine pressure at each wellhead shall be monitored every eight hours

2. Subsidence Monitoring

A U.S. Geological Survey monument located near the facility, but outside the cavern boundaries, will be used as a benchmark, or control point. Each wellhead will be marked with a permanent marker, and an initial survey of all wells will be conducted within six months of permit issuance to establish a baseline. After that, every two years, the elevation of the marker on each wellhead will be checked against the benchmark to determine if there has been subsidence. The results of the biennial wellhead surveys will be submitted to EPA within 60 days of the survey date.

3. Ground-Water Monitoring

Ground water on or near the site will be collected and analyzed for total dissolved solids, sodium and chloride on a monthly basis, and the results will be reported to the Director quarterly. All ground-water sample analyses

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must be conducted by a laboratory certified by the New York State Department of Health.

The wells to be used for ground-water monitoring are listed below with the well owners and well locations provided by BPSI in its May 21, 1996 Underground Injection Control Class III permit application.

<u>Well Owner</u>	<u>Location</u>
Robert W. Thompson	9500 feet South of 42° 20' North Latitude 3050 feet West of 77° 15' West Longitude
Warren Thompson	10,720 feet South of 42° 20' North Latitude 2200 feet West of 77° 15' West Longitude
Inergy Midstream, LLC	9050 feet South of 42° 20' North Latitude 1600 feet West of 77° 15' West Longitude
Inergy Midstream, LLC	9500 feet South of 42° 20' North Latitude 1580 feet West of 77° 15' West Longitude
Inergy Midstream, LLC	9490 feet South of 42° 20' North Latitude 1595 feet West of 77° 15' West Longitude
Inergy Midstream, LLC	8070 feet South of 42° 20' North Latitude 1690 feet West of 77° 15' West Longitude

The groundwater samples from the four Inergy Midstream, LLC wells should be collected when the region within which ground water around the well is flowing toward the pumping well is at its greatest areal extent. If a well is used for the production of water during any given month, the sample collected from that well for that month should be collected at the end of the longest pumping cycle for that well in that month, EPA may require additional ground-water monitoring to satisfy the "Absence of Significant Fluid Movement" part of the mechanical integrity testing requirements described in Section A(3)(b) of Part II of this permit.

D. REPORTING

The permittee shall submit, within thirty days of the end of each quarter, quarterly reports to the Director containing the results of the monitoring specified in Section C of Part II of this permit as well as a description of any well repair work performed during the quarter. The quarterly reports and all other monitoring reports, well logs, results of mechanical integrity testing and results of sonar surveys intended for the Director shall be mailed to:

U.S. Environmental Protection Agency

290 Broadway, 20th Floor

New York, New York 10007-1866

Attn: Chief, Ground Water Compliance Section

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

PLUGGING AND ABANDONMENT PLAN

NAME AND ADDRESS OF FACILITY
BATH PETROLEUM STORAGE INC.
P.O. BOX 708
BATH, NY 14810NAME AND ADDRESS OF OWNER/OPERATOR
BATH PETROLEUM STORAGE INC.
20 CROSSWAYS PARK, NORTH
WOODBURY, NY 11797 - 2007LOCATE WELL AND OUTLINE UNIT ON
SECTION PLAT — 640 ACRES

STATE

NY

COUNTY

STIEUBEN

PERMIT NUMBER

SURFACE LOCATION DESCRIPTION

1/4 of 1/4 of 1/4 of 1/4 of Section Township Range

LOCATE WELL IN TWO DIRECTIONS FROM NEAREST LINES OF QUARTER SECTION AND DRILLING UNIT

Surface Location 8835 S 42° 20'
ft. from (N-S) Line of quarter section
2385 W 77° 15'
and ft. from (E-W) Line of quarter section

TYPE OF AUTHORIZATION

- ☐
- Individual Permit
-
- ☐
- Area Permit
-
- ☒
- Rule

Number of Wells 6

Lease Name BATH

WELL ACTIVITY

- ☐
- CLASS I
-
- ☐
- CLASS II
-
- ☐
- Brine Disposal
-
- ☐
- Enhanced Recovery
-
- ☐
- Hydrocarbon Storage
-
- ☒
- CLASS III

Solution Mining

Well Numbers 1, 2, 3, 4, 5, 6

CASING AND TUBING RECORD AFTER PLUGGING

SIZE	WT(LB/FT)	TO BE PUT IN WELL (FT)	TO BE LEFT IN WELL (FT)	HOLE SIZE
10 3/4	32.75	400	400	15
8 5/8	24	400	400	15
7	23	2900	2900	8 3/4
4 1/2	12.5	3200	0	CAVERN

METHOD OF EMPLACEMENT OF CEMENT PLUGS

- ☒
- The Balance Method
-
- ☐
- The Dump Bailer Method
-
- ☐
- The Two-Plug Method
-
- ☐
- Other

CEMENTING TO PLUG AND ABANDON DATA:		PLUG #1	PLUG #2	PLUG #3	PLUG #4	PLUG #5	PLUG #6	PLUG #7
Size of Hole or Pipe in which Plug Will Be Placed (inches)		6.366	6.366	6.366				
Depth to Bottom of Tubing or Drill Pipe (ft.)		2920	450	50				
Sacks of Cement To Be Used (each plug)		100	30	15				
Slurry Volume To Be Pumped (cu. ft.)		118	35.4	17.7				
Calculated Top of Plug (ft.)		2520	350	SFC				
Measured Top of Plug (if tagged ft.)		N/A	N/A	N/A				
Slurry Wt. (Lb./Gal.)		15.6	15.6	15.6				
Type Cement or Other Material (Class III)		STD	STD	STD				

LIST ALL OPEN HOLE AND/OR PERFORATED INTERVALS AND INTERVALS WHERE CASING WILL BE VARIED (If any)

From	To	From	To
3350 ft	2920 ft		

Estimated Cost to Plug Wells

\$4024.50 / WELL X 6 WELLS = \$24,147.00

CERTIFICATION

I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. (Ref. 40 CFR 144.32)

NAME AND OFFICIAL TITLE (Please type or print)

ROBERT V. H. WEINBERG
PRESIDENT

SIGNATURE

DATE SIGNED

12/13/96

